

REMARKS

Claims 1-4 and 7-10 were presented for examination and were pending in this application. In the latest Office Action, claims 1-4 and 7-10 were rejected under U.S. Patent No. 6,704,196 to Rodriguez et al., alone or in combination with U.S. Patent No. 6,034,870 to Osborn et al. With this amendment, claims 1 and 7 are amended. On the basis of the following remarks, consideration of this application and allowance of all pending claims are requested.

Claims 1 and 7 are drawn to a cooling system or apparatus for a personal computer in which a fan directs a flow of air from outside the computer chassis into the computer chassis. The air flow passes over the components within the computer system and then eventually leaves the computer chassis through air outlets. The air outlets are located farther from electronic components on the motherboard that generate a relatively large amount of heat and nearer to elements on the motherboard for which less heat dissipation is desired. In this way, the heated exhaust air is generally directed out of the chassis near the low-heat electrical components instead of near the high-heat electrical components. By directing the heated air away from the components that most need cooling, the cooler air flow tends to be directed over components that generate more heat. Under heat transfer principles, the cooler air cools these higher heat-producing components better than hotter air would, thus increasing the overall cooling effectiveness of the system.

The claims have been amended further to recite that the components being cooled by the claimed system are located in a main chamber of the computer chassis. This main chamber is contrasted with the partitioned chassis of Rodriguez. In Rodriguez's partitioned chassis, the components are placed in different chambers so that air flowing through the chambers passes over the components in a desired order. Accordingly, Rodriguez is similarly concerned with the

order in which components in the computer are cooled, but Rodriguez does so in a completely different way. Disadvantageously, Rodriguez's method constrains the design of the computer system by requiring the computer chassis to include the plurality of partitions. Although this constraint may be acceptable for the rack-mounted systems to which Rodriguez is directed, it may not be acceptable for many other types of computer systems, such as personal computers.¹

Not only does Rodriguez disclose a different technique for directing air flow, Rodriguez discloses a different order of cooling than that in the claimed invention. Contrary to the assertion in the latest Office Action, Rodriguez does not disclose passing the air flow over the higher heat producing components and then over the lower heat producing components. In fact, Rodriguez teaches a air flow path that passes over several low heat producing elements before it reaches the power supply (i.e., a high heat-producing element) and then out of the chassis. Rodriguez specifically teaches, "The power supply usually runs the hottest, and it should be the last item visited by the in-the-round circulating forced-air before being exhausted out the front panel." (Rodriguez, col. 3, lines 11-14.) Rodriguez's suggestion to pass teaching the air flow over the highest heat producing element last is inconsistent with the claimed invention.

Accordingly, not only does Rodriguez fail to disclose or suggest the claimed invention, it teaches away from it. The claims are therefore patentable over Rodriguez and any combination of Rodriguez with other references.

Based on the foregoing, the application is in condition for allowance of all claims, and a Notice of Allowance is respectfully requested. If the examiner believes for any reason direct

¹ Nothing in these remarks is intended to disclaim a chassis that is partitioned. Rather, the distinction being made is that the claimed components are located within the same chamber, not in separate partitions of the computer chassis as in Rodriguez. The claimed invention thus allows a computer chassis to have multiple sections, as long as the other limitations are met.

contact would help advance the prosecution of this case to allowance, the examiner is encouraged to telephone the undersigned at the number given below.

Respectfully submitted,
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